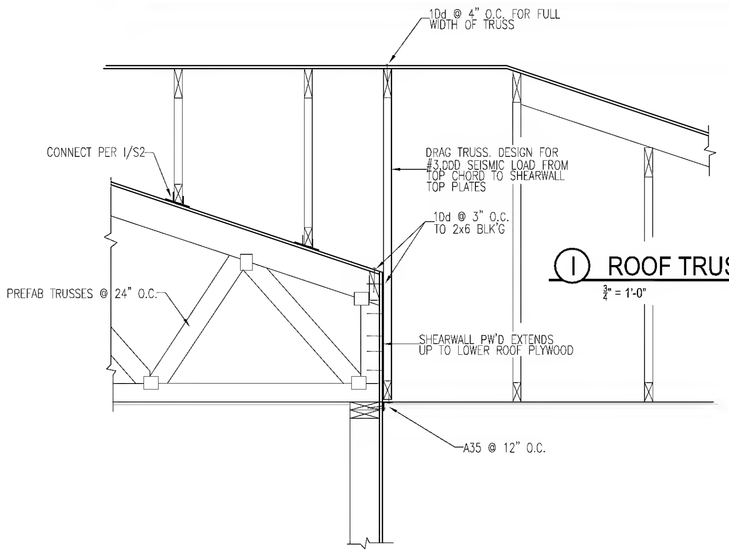
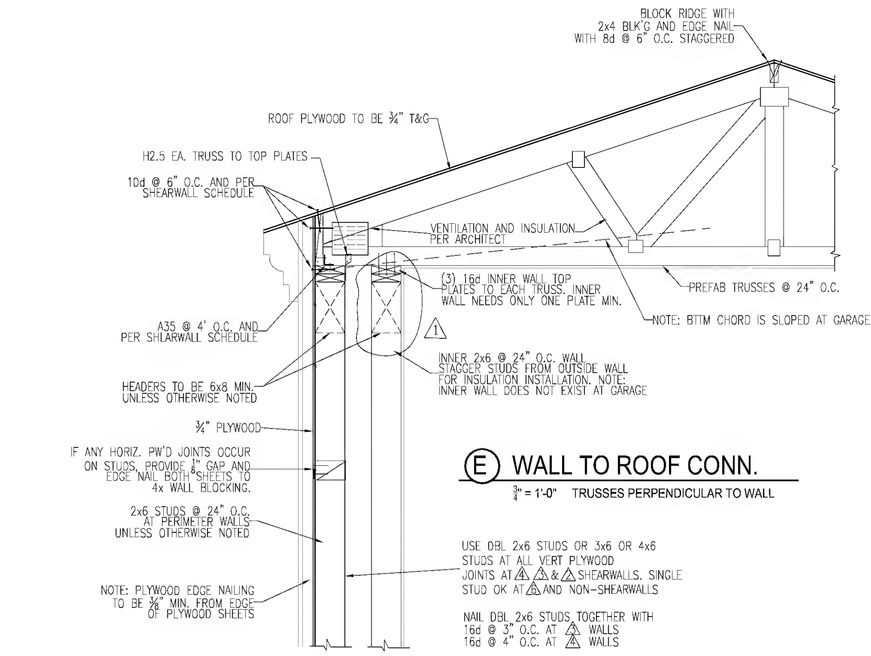


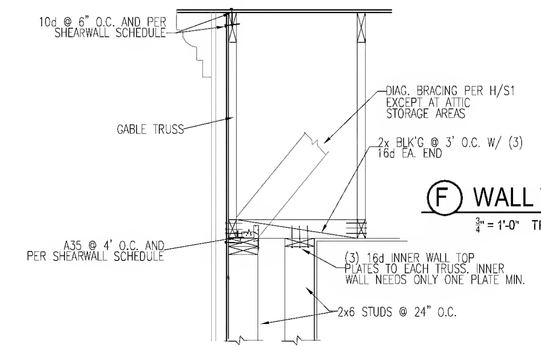
(I) ROOF TRUSS SECTION

½" = 1'-0"



(E) WALL TO ROOF CONN.

½" = 1'-0" TRUSSES PERPENDICULAR TO WALL

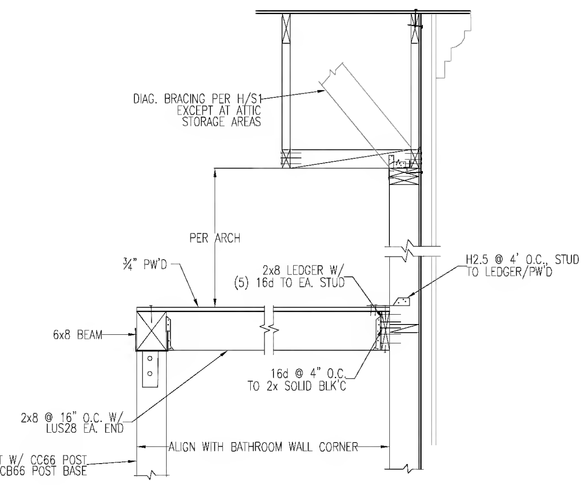


(F) WALL TO ROOF CONN.

½" = 1'-0" TRUSSES PARALELL TO WALL

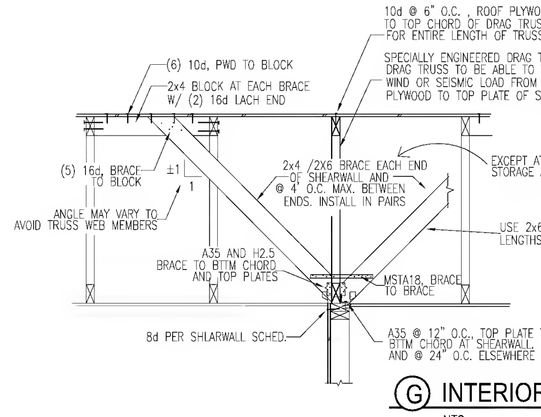
DESIGN BASIS:

1. CONSTRUCT IN CONFORMANCE WITH THE 2010 CALIFORNIA BUILDING CODE AND ALL APPLICABLE LOCAL ORDINANCES.
2. DEAD AND LIVE LOADS PER 1603.1.1 AND 1603.1.2
   FLOOR DEAD LOAD = N/A FLOOR LIVE LOAD = N/A
   ROOF DEAD LOAD = 28 PSF ROOF LIVE LOAD = 20 PSF
3. SNOW LOAD PER 1603.1.3 Pf = 0. SNOW EXPOSURE N/A. SNOW IMPORTANCE FACTOR = 1.0
4. WIND DESIGN DATA PER 1603.1.4
   1. BASIC WIND SPEED = 85 MPH
   2. WIND IMPORTANCE FACTOR = 1.0 OCCUPANCY CATEGORY II
   3. WIND EXPOSURE = B
   4. INTERNAL PRESSURE COEFFICIENT = + 0.18 / −0.18
   5. COMPONENT AND CLADDING WIND PRESSURE = N/A
4. SEISMIC DESIGN DATA PER 1603.1.5
   1. SEISMIC IMPORTANCE FACTOR = 1.0 OCCUPANCY CATEGORY II
   2. MAPPED DESIGN SPECTRAL RESPONSE ACCELERATIONS
      S_s = 1.262 S_1 = 0.542G
   3. SITE CLASS = D
   4. SPECTRAL RESPONSE COEFFICIENTS
      S_{DS} = 0.841 S_{D1} = 0.542
   5. SEISMIC DESIGN CATEGORY = D
   6. BASIC SEISMIC FORCE RESISTING SYSTEM = LIGHT-FRAMED WALLS SHEATHED WITH PLYWOOD
   7. DESIGN BASE SHEAR = 0.13W
   8. SEISMIC RESPONSE COEFFICIENT C_S = 0.13
   9. RESPONSE MODIFICTION FACTOR, R = 6.5
   10. ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE ANALYSIS



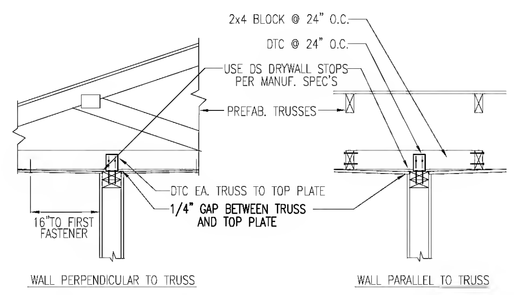
(L) GARAGE LOFT SECTION

½" = 1'-0"



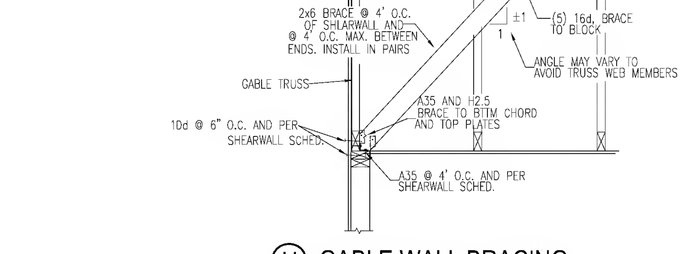
(G) INTERIOR SHEARWALL

NTS



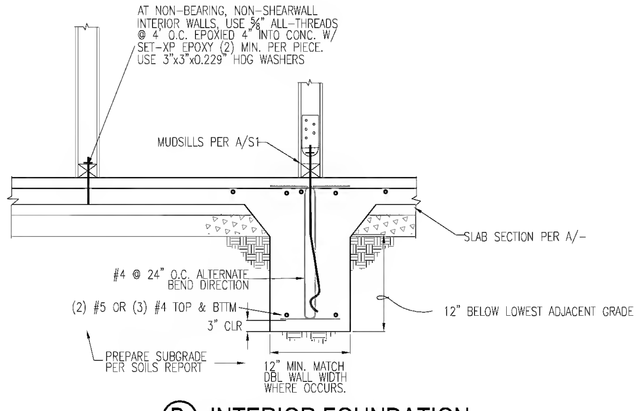
(K) TRUSS AT NON-BR'G WALLS

NTS



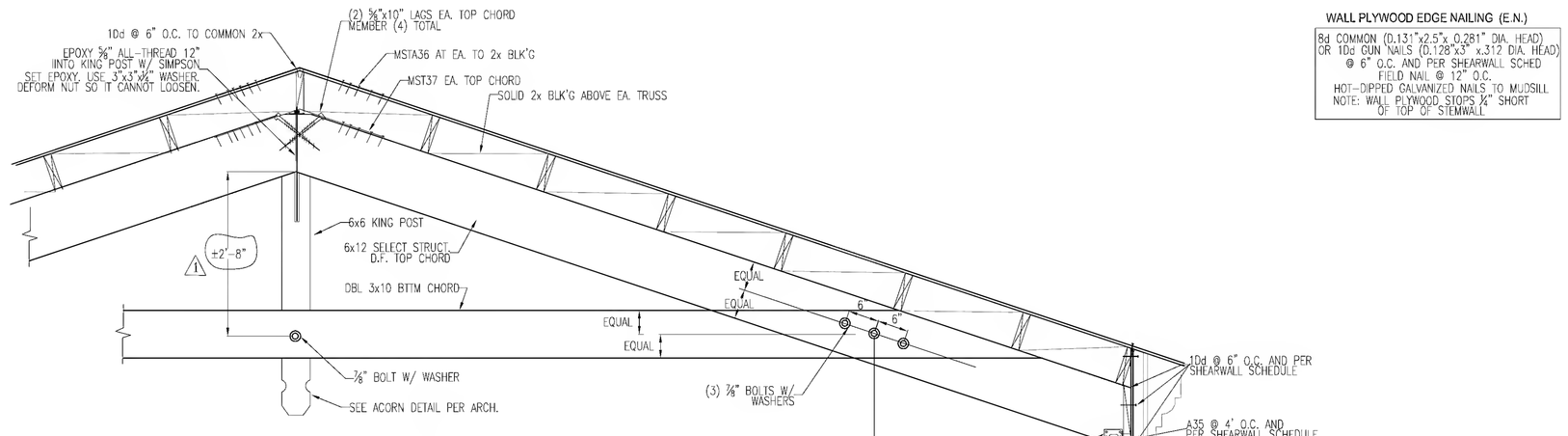
(H) GABLE WALL BRACING

NTS NOT REQ'D AT STORAGE ATTIC AREAS



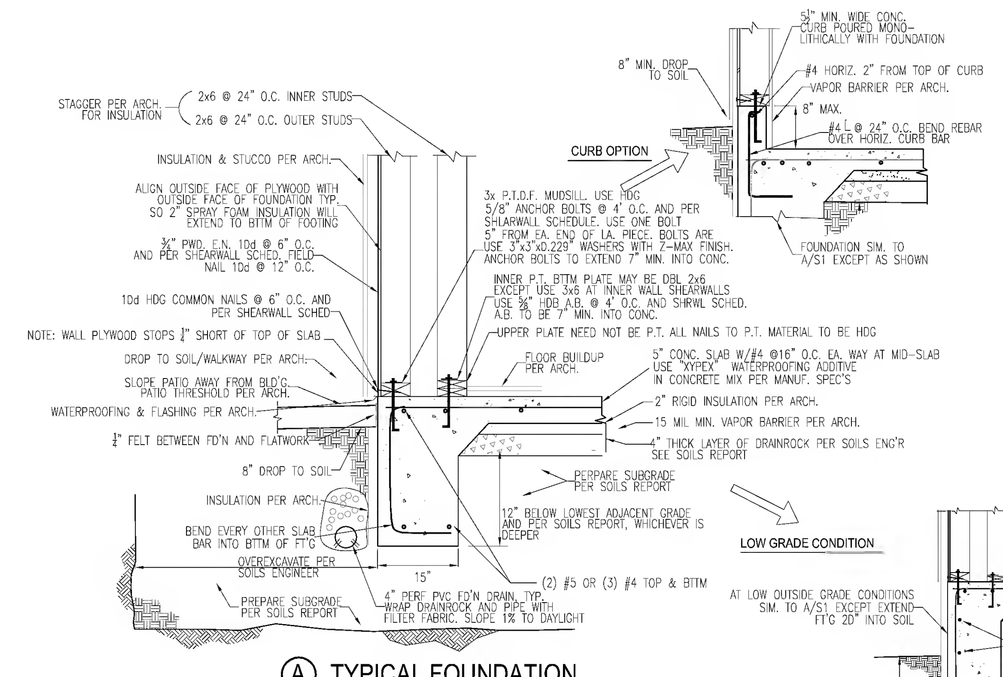
(B) INTERIOR FOUNDATION

¾" = 1'-0"



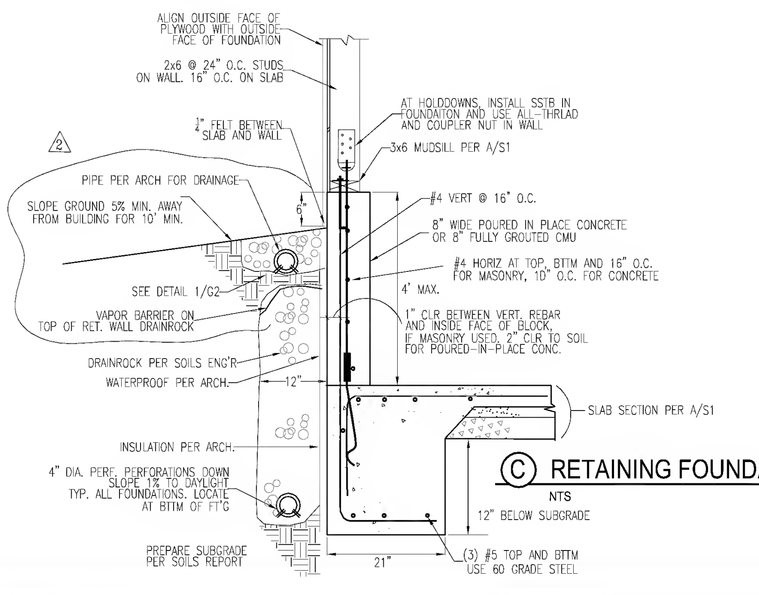
(J) ROOF TRUSS SECTION

¾" = 1'-0"



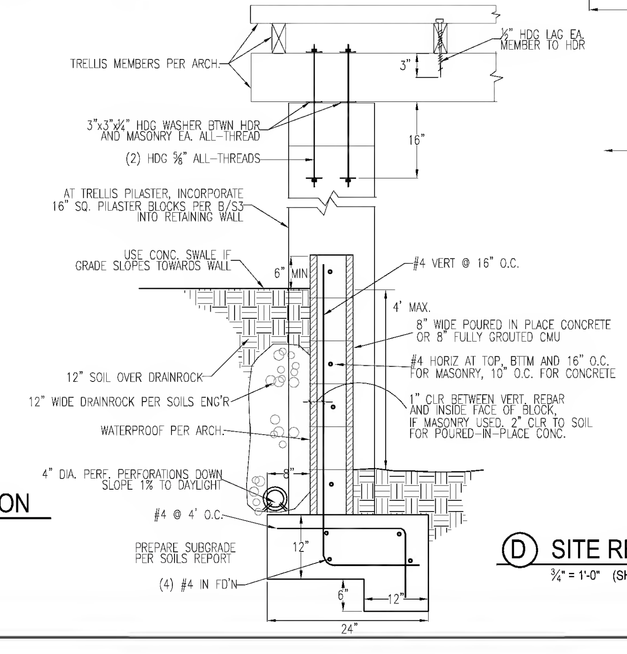
(A) TYPICAL FOUNDATION

¾" = 1'-0"



(C) RETAINING FOUNDATION

NTS



(D) SITE RETAINING WALL

¾" = 1'-0" (SHOWS TRELLIS)

STRUCTURAL NOTES

GENERAL:

1. ALL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE 2010 CA BUILDING CODE. IF, DURING THE CONSTRUCTION THE CONTRACTOR FINDS STRUCTURAL CONDITIONS DIFFERENT THAN THOSE ON THE DRAWING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING FURTHER. ANY UNUSUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FURTHER WORK.
2. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO START OF WORK.
3. THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR THE BRACING AND SHORING. THE CONTRACTOR SHALL NOT STORE CONSTRUCTION MATERIAL IN A MANNER SUCH THAT THE DESIGN LIVE LOAD OF THE STRUCTURE ARE EXCEEDED (16 psf ON THE ROOF, 40 psf ON THE FLOOR)
4. THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR JOBSITE SAFETY AND SHALL ADHERE TO ALL FEDERAL, STATE, LOCAL, AND O.S.H.A. STANDARDS.
5. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION.
6. THE LOCATION AND PROTECTION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER IF THE UTILITY LINES RUN THROUGH OR WITHIN 24" BELOW, ANY NEW CONCRETE CONSTRUCTION. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH THE DESIGN DETAILS UNDER SUCH CIRCUMSTANCES.
7. ALL WORK SHALL CONFORM TO THE SOILS REPORT BY **GRICE ENGINEERING, INC.** REPORT No. **5947-12.05** DATED **6-20-12** AND ALL APPLICABLE ADDENDUMS.

LUMBER :

1. ALL LUMBER SHALL BE DOUGLAS FIR-LARCH UNLESS OTHERWISE NOTED, GRADED IN ACCORDANCE WITH WESTERN WOOD PRODUCTS ASSOCIATION OR WEST COAST LUMBER INSPECTION BUREAU. MAXIMUM MOISTURE CONTENT SHALL BE 19% MARKED S-DRY ALL LUMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED DOUGLAS FIR, TREATED ALL CUT SURFACES. LUMBER GRADES ARE AS FOLLOWS UNLESS OTHERWISE NOTED:

2x4 STUDS AND BLOCKING	CONSTRUCTION GRADE OR BETTER
2x6 STUDS	No. 2 OR BETTER
JOISTS/RAFTERS	No. 2 OR BETTER
4x AND LARGER	No. 1
POSTS	No. 1

2. PLYWOOD SHALL BE EXTERIOR OR EXPOSURE 1 CONFORMING TO U.S. PRODUCT STANDARDS PS-183 WITH EXTERIOR GLUE, GRADE STAMPED A.P.A. (AMERICAN PLYWOOD ASSOCIATION). PROVIDE 1/8" GAP AT PANEL JOINTS. NAIL HEADS SHALL NOT PENETRATE PLYWOOD SKIN

   WALL PLYWOOD TO BE 3/4" MIN. CDX (SEE SHEARWALL SCHED.) WITH A SPAN RATING OF 20/0 OR BETTER. EDGE NAIL WITH 10d @ 6" O.C., FIELD NAIL WITH 10d @ 12" O.C. SHEARWALL, EDGE NAILING PER SHEAR WALL SCHEDULE. BLOCK AND EDGE NAIL AT ALL PLYWOOD EDGES AT SHEARWALLS. PLYWOOD FACE GRAIN TO BE VERTICAL. 1/2" STRUCT 1 PLYWOOD MAY BE REQUIRED AT SPECIFIC LOCATIONS, SEE SHEARWALL SCHED.

   ROOF PLYWOOD TO BE 3/4" T&G CDX WITH A SPAN RATING OF 24/0 OR BTR. EDGE NAIL WITH 8d @ 6" O.C., FIELD NAIL WITH 8d @ 12" O.C. INCREASED NAILING IS REQUIRED FOR ROOF PLYWOOD OVER SHEARWALLS. SEE SHEAR WALL SCHEDULE FOR SPECIFICS. USE SIMPSON PLYWOOD SHEATHING CLIP (PSC), AT ALL UNSUPPORTED PLYWOOD EDGES IF NON T&G SHEATHING IS USED, ONE PER SPAN. PLYWOOD FACE GRAIN TO BE PERPENDICULAR TO SUPPORTS.
3. NAILS SHALL BE COMMON WIRE NAILS. NAILS AND CONNECTORS EXPOSED TO WEATHER SHALL BE GALVANIZED. ALL NAILING TO CONFORM TO C.R.C. TABLE R602.3(1). BOLTS HOLE SHALL BE 1/16" MAX. LARGER THAN THE BOLT DIAMETER. BOLTS SHALL BE TIGHTENED WHEN PLACED AND RE-TIGHTENED PRIOR TO CONCEALING. ALL NAILING SHALL BE DONE WITHOUT SPLITTING WOOD. CONTRACTOR TO PREDRILL AS REQUIRED TO PREVENT SPLITTING WOOD. ALL MEMBERS SPLIT BY NAILING SHALL BE REPLACED. ALL HOLES FOR BOLTS SHALL BE ACCURATELY DRILLED IN CORRECT SIZES AND LOCATIONS TO PREVENT FORCING OR LOOSENESS IN CONNECTIONS
4. ALL FRAMING CONNECTORS SHALL BE BY "SIMPSON STRONG-TIE" COMPANY. ALL CONNECTORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
5. CONTRACTOR SHALL PRE-DRILL HOLES FOR LAG BOLTS, LEAD HOLE SHALL BE 50% TO 67% OF BOLT DIAMETER FOR THREADED PORTION OF BOLT AND ACTUAL BOLT DIAMETER FOR UNTHREADED SHANK. ALL SPLIT MEMBERS SHALL BE REPLACED.
6. ALL ANCHOR BOLTS AND HOLDDOWN BOLTS SHALL HAVE 3"x3"x1/4" HDG WASHERS AGAINST WOOD SURFACE
7. ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE AND UNIFORM BUILDING CODE STANDARDS.
8. PLYWOOD SHEATHING USED IN THE CONSTRUCTION OF SHEARWALLS AND BLOCKED DIAPHRAGMS SHALL BE MINIMUM FOUR PLY CONSTRUCTION.
9. FASTENERS FOR SHEARWALLS AND DIAPHRAGMS SHALL BE COMMON NAILS WITH FULL HEADS THAT MEET TOLERANCES FOR HEAD, SHANK, AND LENGTH IN ASTM 1667 FOR HAND-DRIVEN NAILS.

ALL ANCHOR BOLTS AND ANCHOR BOLT NUTS, AND WASHERS TO BE HOT DIPPED GALVANIZED. ALL NAILS, NUTS, AND WASHERS THAT ATTACH PRESSURE-TREATED LEDGERS OR LUMBER SHALL BE HOT-DIP GALVANIZED MUDSILL AND P.T. LEDGER WASHERS SHALL BE 3"x3"x¼" HDGING

STEEL REINFORCING:

1. STEEL REINFORCING FOR CONCRETE AND MASONRY SHALL BE ASTM A-615 GRADE 60 FOR #5 BARS AND LARGER, GRADE 40 FOR #4 BARS AND SMALLER. STEEL SHALL BE FREE OF MUD, OIL, AND OTHER MATERIALS AT THE TIME OF PLACING. BARS SHALL BE LAPPED 50 DIAMETERS AT SPLICES. SPLICES SHALL BE STAGGERED. MAXIMUM STEEL CLEARANCES FOR CONCRETE SHALL BE 3" FOR CONCRETE PLACED AGAINST EARTH, 2" AGAINST FORMED SURFACES.
2. STEEL REINFORCING SHALL BE SECURELY IN PLACE AND INSPECTED BY THE BUILDING INSPECTOR PRIOR TO PLACING OF CONCRETE. ALL REINFORCING BAR BENDS ARE TO BE DONE COLD. BARS ARE TO BE BENT ONE TIME ONLY. BARS WITH KINKS NOT SHOWN ON THE DRAWING SHALL BE NOT USED.

CONCRETE :

1. ALL CONCRETE SHALL BE REGULAR WEIGHT AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. AGGREGATE SHALL BE NORMAL WEIGHT 3/8" TO 3/4" AND CONFORM TO ASTM C-33. CONCRETE SHALL HAVE BETWEEN 3" AND 4" SLUMP AT THE TIME OF PLACEMENT. FOUNDATION DESIGNED FOR 2500 PSI, (NO TEST CYLINDERS REQ'D) RAISED GARAGE SLAB IN F/S5 AND WALL IN E/S4 TO BE 4000 PSI. TEST CYLINDERS REQ'D
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE 1
3. WATER USED IN MIXING OF CONCRETE SHALL BE POTABLE AND FREE FROM DELETERIOUS SUBSTANCES.
4. CONCRETE SHALL NOT BE PLACED UNTIL FORMS, REINFORCEMENT, AND EMBEDDED ITEMS ARE IN PLACE AND HAVE BEEN INSPECTED BY THE BUILDING INSPECTOR. THOUROUGHLY WET SUBGRADE OF ALL SLAB AREAS PRIOR TO PLACING CONCRETE.
5. CONCRETE SHALL BE THOROUGHLY WORKED AROUND ALL REINFORCING, EMBEDDED FIXTURES, AND INTO CORNERS OF FORMS.
6. DURING MIXING, PLACING, AND CURING, CONCRETE SHALL BE BETWEEN 40° AND 90° F CONCRETE SHALL BE CURED BY KEEPING IT IN A CONTINUOUSLY MOIST CONDITION FOR FIVE DAYS AFTER PLACEMENT.
7. UNLESS OTHERWISE NOTED, THE SURFACE OF CONCRETE SLABS SHALL BE SMOOTH AND SHALL NOT VARY MORE THAN 1/8" ACROSS THE LENGTH OF A 10' STRAIGHTEDGE. PLACING OF SLAB CONCRETE SHALL BE A CONTINUOUS OPERATION BETWEEN PRE-DETERMINED JOINTS. MIN. LAP OF WELDED WIRE FABRIC SHALL BE 6" OR ONE FULL MESH, WHICHEVER IS GREATER.
8. WHEN EPOXYING ALL THREADS OR ANCHORS BOLTS INTO EXISTING CONCRETE, USE "SIMPSON" "SET-XP" EPOXY. INSTALL 10" MINIMUM INTO EXISTING CONCRETE UNLESS NOTED ON THE PLANS. INSTALL PER MANUFACTURER'S SPECIFICATION. DO NOT USE WEDGE ANCHORS UNLESS SPECIFIED ON PLANS.

CONCRETE BLOCK MASONRY :

1. THE MASONRY CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SPECIFICATIONS AND NOTE ALL CONDITIONS THAT MAY AFFECT HIS WORK. WHERE ANY CONFLICT IS NOTED, HE/SHE SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK. WHERE ANY DEVIATION FROM THE PLANS AND THE SPECIFICATIONS IS TO BE MADE, THE ENGINEER SHALL BE NOTIFIED AND HIS WRITTEN APPROVAL OBTAINED PRIOR TO PROCEEDING.
2. CONCRETE BLOCK MASONRY UNITS SHALL BE GRADE N AND CONFORM TO ASTM C90 WITH 1500 PSI MINIMUM COMPRESSIVE STRENGTH. BECAUSE ALLOWABLE STRESSES WERE USED IN THE DESIGN, SPECIAL INSPECTION IS NOT REQUIRED. MASONRY UNITS SHALL BE HOLLOW WITH CELLS LARGE ENOUGH TO PERMIT PROPER PLACEMENT OF THE REINFORING AND GROUT. "SPLIT FACE BLOCKS" LACKING WEBS MAY BE USED AT THE OPTION OF THE OWNER. CHIPPED OR CRACKED BLOCKS SHALL NOT BE USED. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.
3. ALL MASONRY SHALL BE LAID TRUE AND LEVEL, NEATLY, AND IN ACCORDANCE WITH PLANS. ALL CELLS TO BE GROUTED. MASONRY SHALL BE LAID IN A COMMON BOND PATTERN.
4. MORTAR SHALL CONFORM TO ASTM C 270 TYPE M OR S AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
5. GROUT SHALL CONFORM WITH ASTM C476 AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. 3/8" AGGREGATE SIZE.
6. WALLS OVER FIVE FEET TALL SHALL BE PROVIDED WITH BOTTOM CLEAN-OUTS AS REQUIRED BY UBC 2104.6.1 ALL CELLS SHALL BE FILLED SOLID WITH GROUT AND REINFORCING AS SHOWN IN THE SPECIFIC DETAILS. GROUTED CELLS SHALL BE CONSOLIDATED IMMEDIATELY DURING THE POUR AND RECONSOLIDATED AFTER WATER ABSORPTION BY THE BLOCK MASONRY SET BEFORE THE GROUT LOSES PLASTICITY. GROUT SHALL NOT BE OVER-VIBRATED, DEFINED BY AGGREGATE SEPERATION FROM THE MORTAR PASTE.
7. ALL WATER TO BE USED SHALL BE POTABLE, CLEAN, AND FREE FROM INJURIOUS AMOUNTS OF OILACID, ALKALI, ORGANIC MATTER, OR ANY OTHER HARMFUL SUBSTANCE.
8. LAP SPLICE ALL BARS A MINIMUM OF 50 DIAMETER BARS, WITH A MINIMUM LAP OF 18" UNLESS OTHERWISE NOTED.
9. ADMIXTURES SHALL NOT BE ADDED TO THE CONCRETE UNLESS APPROVED IN WRITING BY THE ENGINEER.
10. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 40 FOR #4 AND SMALLER BARS. ALL REINFORCING SHALL BE FREE FROM DIRT, GREASE, RUST, OR OTHER FOREIGN SUBSTANCE THAT MAY PREVENT PROPER BONDING. ALL REINFORCING BAR BENDS ARE TO BE MADE COLD. ALL BARS TO BE BENT ONE TIME ONLY.

WALL PLYWOOD EDGE NAILING (E.N.)

8d COMMON (0.131"x2.5"x.0.281" DIA. HEAD) OR 10d GUN NAILS (0.128"x3" x.312 DIA. HEAD) @ 6" O.C. AND PER SHEARWALL SCHED @ 12" O.C. FIELD NAIL
HDT-DIPPED GALVANIZED NAILS TO MUDSILL
NOTE: WALL PLYWOOD STOPS ½" SHORT OF TOP OF STEMWALL

NOTE: THESE DRAWINGS ARE FOR STRUCTURAL ELEMENTS ONLY. WATERPROOFING, FLASHING, AND ARCHITECTURAL FEATURES ARE NOT SHOWN. SEE ARCHITECTURAL PLANS FOR WATERPROOFING, FLASHING, AND OTHER INFORMATION.

REGISTERED PROFESSIONAL ENGINEER JERRY R. TAYLOR No. 51697 CIVIL STATE OF CALIFORNIA
EXPIRES 9/30/13

PLAN CHECK RESPONSE ⚠1
2ND PLAN CHECK RESPONSE ⚠2

REVISIONS:
6-17-13
8-2-13

STRUCTURAL DETAILS
FOR:
19 La RANCHERIA
CARMEL VALLEY, CALIFORNIA
PREPARED FOR:
JOHN & JULIE TOMLIN

JERRY R. TAYLOR, CIVIL ENGINEER
P.O. BOX 51697 PACIFIC GROVE, CALIFORNIA (831) 372-5890 / jrtce@att.net

JOB No. 12-30 | SCALE: 3/4" =1'-0" | DATE: OCT. 2011 | SHEET: S1